NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*T4 RNA Ligase 1 (ssRNA Ligase)*
Catalog Number:	*M0437M*
Concentration:	*30,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to convert 1 nanomole of 5´-[^{32}P] rA16 into a phosphatase-resistant##form in 30 minutes at 37°C.*
Lot Number:	*10031991*
Expiration Date:	*11/2020*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-M0437M v1.0*

T4 RNA Ligase 1 (ssRNA Ligase) Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
N0437AVIAL	ATP	10028251	**Pass**
M0437MVIAL	T4 RNA Ligase 1 (ssRNA Ligase), High Concentration	10028250	**Pass**
B1004AVIAL	PEG 8000	10009392	**Pass**
B0216SVIAL	T4 RNA Ligase Reaction Buffer	10031853	**Pass**

Assay Name/Specification	**Lot # 10031991**
Endonuclease Activity (Nicking) A 50 µl reaction in T4 RNA Ligase 1 Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 units of T4 RNA Ligase 1 (ssRNA Ligase), High Concentration incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in T4 RNA Ligase 1 Reaction Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 30 units of T4 RNA Ligase 1 (ssRNA Ligase), High Concentration incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
Protein Purity Assay (SDS-PAGE) T4 RNA Ligase 1 (ssRNA Ligase), High Concentration is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**

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Assay Name/Specification	Lot # 10031991
qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of T4 RNA Ligase 1 (ssRNA Ligase), High Concentration is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.	**Pass**
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of RNA transcript and a minimum of 30 units of T4 RNA Ligase 1 (ssRNA Ligase), High Concentration is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using gel electrophoresis.	**Pass**

This product has been tested and shown to be in compliance with all specifications.

Bo Wu
Production Scientist
19 Jun 2018

Michael Tonello
Packaging Quality Control Inspector
17 Dec 2018